

U.S. Application No. 10/692,957
Response AF dated July 5, 2006
In Reply to Office Action Made Final of May 5, 2006

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REMARKS

Claims 1-26 are pending. Claims 20-22, 25 and 26 were withdrawn. Claims 1-19, 23 and 24 stand rejected as set forth in an Office Action Made Final.

CLAIMS 5-11, 14, 15 AND 17-19

Claims 5-11, 14, 15 and 17-19 stand rejected under 35 U.S.C. § 103(a) as being obvious over United States Patent No. 6,337,893 B1 ("Pontius") in view of United States Patent No. 6,703,950 B2 ("Yi"), and further in view of United States Patent No. 6,810,468 B2 ("Miyamoto"). Applicant respectfully request that the Examiner reconsider the rejection.

Argument No. 1: Claims 5-11, 14, 15 and 17-19

In the Office Action Made Final, the Examiner argues that "the teachings of Pontius and Yi do not teach away from those of Miyamoto, but are merely ordinary engineering design considerations. The excess capacity and wastefulness of 2^N depth FIFOs is an ordinary consideration when trying to balance capacity, space, and cost in the design of a system".

Applicant agrees that Miyamoto teaches excess capacity and more wastefulness by teaching 2^N depth FIFOs.

Clearly, Miyamoto is an engineering step backwards with respect to alleged design considerations.

Thus, it is even more puzzling and defies the Examiner's own logic to rely upon the teachings of Miyamoto (with its admittedly excess capacity and more wasteful teachings of 2^N depth FIFOs) to MODIFY the allegedly less wasteful teachings of Yi and the allegedly less wasteful teachings of Pontius. The Examiner's own conclusion as quoted above strengthens Applicant's argument.

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It is important to note that the Examiner is modifying the teachings of Pontius and Yi in view of the teachings of Miyamoto!

Thus, the Examiner's own stated conclusion supports Applicant's argument that the Examiner is modifying the teachings of Pontius and Yi (which are allegedly less wasteful) with the teachings of Miyamoto (which the Examiner has characterized as excess capacity and more wasteful).

For at least the above reasons, it is respectfully requested that the rejection under 35 U.S.C. § 103(a) be withdrawn with respect to claims 5-11, 14, 15 and 17-19.

Argument No. 2: Claims 5-11, 14, 15 and 17-19

M.P.E.P. § 2143.01(V) states that "[i]f proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, there is no suggestion or motivation to make the proposed modification". M.P.E.P. § 2143.01(V) at 2100-137 (Rev. 3, Aug. 2005).

What is the intended purpose of Pontius? Applicant looks to the specification of Pontius. Pontius states unequivocally that

[a] major objective of the invention is to provide for FIFO systems that permit simple detection of "full" and "empty" conditions when using read and write pointers with modulo numbers that are not powers of two.

Pontius at col. 1, lines 12-15 (bold added).

Can Pontius achieve this intended purpose in view of proposed modification of Pontius by the reflective symmetry teachings of Yi? Applicant looks to the specification of Pontius for guidance. Pontius states that

[b]ecause of the translation symmetry, detectors that work with counters with modulo numbers that are power of two work with the corresponding non-power-of-two counter to provide "full" and "empty" indications.

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Pontius at Abstract, lines 13-16.

By modifying Pontius with the reflective symmetry teachings of Yi, Pontius can no longer achieve the “major objective of the invention”.

Since the proposed modification of Pontius in view of the teachings of Yi would render Pontius unable to achieve the “major objective of the invention”, M.P.E.P. § 2143.01(V) concludes that there is no suggestion or motivation to make the proposed modification.

Note that Applicant is not nakedly stating that there is no suggestion or motivation to combine Pontius and Yi. Applicant is fully aware that Examiners generally combat such naked arguments with standard boilerplate responses about the suggestion or motivation to combine documents.

Instead, Applicant is stating that even if the Examiner states that there is some alleged suggestion or motivation to combine Pontius and Yi (which all Examiners allege in an obviousness rejection), M.P.E.P. § 2143.01(V) provides a decidedly different conclusion.

To reach a different conclusion from M.P.E.P. § 2143.01(V) based on the Examiner's previously stated suggestion or motivation would be to relegate an M.P.E.P. § 2143.01(V) determination to the status of a pointless exercise or a meaningless proof since every Examiner can always respond with his or her originally stated suggestion or motivation for combination.

Applicant believes that satisfying the elements of proof in an M.P.E.P. § 2143.01(V) determination is not a pointless exercise and that an M.P.E.P. § 2143.01(V) determination is not a meaningless proof.

Having demonstrated the elements of proof in an M.P.E.P. § 2143.01(V) determination, Applicant respectfully submits that the stated conclusion of M.P.E.P. § 2143.01(V) overcomes the Examiner's alleged suggestion or motivation for combination.

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In view of the M.P.E.P. § 2143.01(V) conclusion, it is respectfully submitted that the obviousness rejection has been traversed.

For at least the above reasons, it is respectfully requested that the obviousness rejection be withdrawn with respect to claims 5-11, 14, 15 and 17-19.

CLAIMS 1-4, 12, 13, 16, 23 AND 24

Claims 1-4, 12, 13, 16, 23 and 24 stand rejected under 35 U.S.C. § 103(a) as being obvious over Pontius in view of Yi. Applicant respectfully request that the Examiner reconsider the rejection.

Applicant hereby incorporates herein the arguments and rebuttal evidence made above in the subsection "Argument No. 2" in their entirety

For at least the above reasons, it is respectfully requested that the obviousness rejection be withdrawn with respect to claims 1-4, 12, 13, 16, 23 and 24.

Further evidence in support of this can be found in the Amendment dated February 14, 2005 on pages 7-8. Applicant reproduces such statements herein as a courtesy for the Examiner's reconsideration.

Yi teaches that the removal of an equal number of codes *immediately* above and below the axis of reflection of a Gray code sequence to generate a shorter Gray code sequence. Yi at col. 4, lines 16-19.

On the other hand, Pontius teaches away from merely removing an equal number of codes immediately above and below the axis of reflection as taught by Yi. Instead, Pontius teaches that the reduced Gray code must have (1) bilateral translation symmetry and (2) bilateral reflective symmetry. See, e.g., Pontius at abstract at lines 5-9; and col. 5, lines 55-67.

For demonstration, the Examiner's attention is drawn to the table in col. 5 of Pontius. According to Yi, to make a modulo 12 Gray code, Yi would remove lines 6-9 from the table. However, Pontius at col. 5, lines 55-67, for example, teaches that such a modulo 12 Gray code according to Yi would not have bilateral translation symmetry as required by and defined in Pontius. For example, in Pontius according to Pontius' definition of bilateral translation symmetry, line 1

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demonstrates bilateral translation symmetry with line 9; line 2 demonstrates bilateral translation symmetry with line 10; etc. However, using the teaching of Yi in obtaining a modulo 12 Gray code, there is no bilateral translation symmetry. As defined in Pontius and in accordance with the teaching of Yi in generating a modulo 12 Gray code, line 0 does not demonstrate bilateral translation symmetry with line 10; line 1 does not demonstrate bilateral translation symmetry with line 11; etc.

According to Pontius, "[b]ecause of the translational symmetry, detectors that work with counters with modulo numbers that are power of two work with corresponding non-power-of-two counter to provide 'full' and 'empty' indications. When read and write counts differ at the two most-significant bit positions but are equal at the remaining bit positions, the detector provides a 'full' indication for a 6-count FIFO". Pontius at abstract, lines 10-16. The simple determination of whether the FIFO is full or empty is a core principle of operation of Pontius. In fact, Pontius disparages prior art that does not provide a simple indication of a full or empty FIFO. See, e.g., Pontius at col. 3, lines 3-8.

Thus, without translational symmetry, the modulo-12 Gray code used for a 6-count FIFO as set forth in Pontius would no longer operate, for example, with a simple indication of a full or empty FIFO. In other words, to modify, for example, FIGS. 1 and 2 of Pontius with the teachings of Yi would change the core principle of operation of the block diagram of FIG. 1 of Pontius and the method as set forth in the flowchart of FIG. 2 of Pontius. M.P.E.P. § 2143.01(VI) states that "[i]f the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious". M.P.E.P. at page 2100-138 (Rev. 3, Aug. 2005)(italics and case citation omitted). Therefore, an obviousness rejection based on Pontius in view of Yi cannot be maintained.

It is therefore respectfully requested that the rejection under 35 U.S.C. § 103(a) be withdrawn with respect to claims 1-19, 23 and 24.

For at least the above reasons, it is respectfully requested that the obviousness rejection be withdrawn with respect to claims 1-4, 12, 13, 16, 23 and 24.

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CONCLUSION

In view of at least the foregoing, it is respectfully submitted that the application is in condition for allowance. Should anything remain in order to place the present application in condition for allowance, the Examiner is kindly invited to contact the undersigned at the below-listed telephone number.

The Commissioner is hereby authorized to charge additional fees or credit overpayments to the deposit account of McAndrews, Held & Malloy, Account No. 13-0017.

Dated: July 5, 2006

Respectfully submitted,


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